

# **Massachusetts Community and State College Recycling: Westfield State College**

FINAL REPORT

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*Submitted to:*

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## **Westfield State College (Table 8)**

Westfield State College manages an aggressive and successful recycling program, which captures all of the major recyclable waste streams. Its fiber recycling program is expensive, however – approximately \$2,000 per year for its mixed paper program and nearly \$8,000 per year for its cardboard program. These programs can be simplified and costs can be reduced by combining mixed paper and cardboard in a single breakaway compactor. With lease or purchase of a compactor, and accounting for avoided disposal costs, we estimate that Westfield State can realize savings of \$30,000 to \$35,000 per year, and increase its recycling rate by about 10%.

**Westfield State College**  
**Recycling Status, Issues, and Opportunities**  
**Westfield State College**

Primary Contact: Jim Rovezzi  
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**Current Status**

Westfield State (WSC) operates one of the most comprehensive recycling programs among the schools we investigated. WSC recycles all major commodities – mixed paper (an “anything that tears” mix), cardboard, beverage containers, scrap metal, electronics, and universal wastes. The school also manages an effective program to recycle construction and demolition waste from in-house projects, and coordinates donation of most of the surplus property that does not move through the state system.

**Issues / Opportunities**

WSC’s biggest opportunity to improve recycling outcomes is in its fibers. Recovered tonnage for both mixed paper and cardboard is low compared to estimated generation. Continued emphasis on education (for students and staff), acquisition of additional recycling containers, and container placement should go far toward addressing this concern. WSC may also be able to enhance recovery, reduce costs, and increase the potential for revenue return from its fibers by compacting cardboard and/or mixed paper. Space is a serious issue on this campus, however, and finding room to place two new compactors may be problematical. STCC may be able to market a full fiber mix that includes both cardboard and mixed paper. If so, this may be its best alternative to simultaneously optimize its recovery rate and cost/benefit balance for recycled fibers.

**Impacts on Waste Disposal**

Without disposal information (which WSC has not yet been able to assemble), we cannot estimate a current recycling rate or project increases in the rate attributable to enhanced recycling efforts. But based on student population, it is clear that fiber recycling rates in particular can be significantly increased through continued attention to the programs that WSC already has in place.

**Westfield State College**  
**Massachusetts Community/State College Recycling: Current Practices and Potential Modifications**

Institution: Westfield State College Contact: Jim Rovezzi		Phone: 413-572-5289	Date: Email: jrovezzi@wisdom.wsc.ma.edu
Material	Current Practice	Recommended Modifications	Comments/Notes
Mixed Office Paper (unshredded)	Mixed paper. Collected by maintenance staff. Paper from office bins is emptied into 96 gallon wheeled carts. Carts are placed on curb for WMX to pick up in packer truck.	Consider compactor system with automated toter dumper.	Tonnage is light (8 tons for the year), especially for all buildings. Collection logistics are working well, and facilities is growing the program effectively.
Confidential Documents	Internal shredding	None	Mixed in with paper at curb
Newspaper/Magazine Mix	See above		
Cardboard	Collected by maintenance staff by hand and transferred to 8 yard dumpster	Consider compactor system, even combining paper and OCC. Add more collection points.	Volume is very low. Dumpster may be too far away from several key generation points. Jim is doing well with what he has to work with (space).
Other			
Beverage Containers	Collected in bags, then into wheeled carts. Picked up on call at central location.	Need to review the program in more detail.	They are making the effort to recover the containers, but face various contamination issues. Some student involvement helps.
Tin Cans	None		
Scrap Metal	New program—started 6-1-03. 15 yard roll off being used	Too early to tell.	Good beginning. Continue to track.
Wood Waste	None		
Computers/Electronic Equipment	IRN services this need. IT, purchasing, and EH&S oversee program. Items are brought by facilities staff to central collection location. Items stored in gaylords for twice a year shipments. 5.4 tons recycled in 17 months.	None	A few big purges in 2002, now they are managing on going flow quite well. They stay on top of the inventory and keep very good records.

**Westfield State College**  
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<b>Material</b>	<b>Current Practice</b>	<b>Recommended Modifications</b>	<b>Comments/Notes</b>
Fluorescent Lamps & Ballasts	IRN services this commodity for them. Facilities collects and transports UWs to storage location. Items are stored in pails, barrels, and fiber drums (or OEM boxes). 2.41 tons recycled in 2002.	None	Very good capture rate and reporting through Mindy Sullivan. Facilities collects everything.
Batteries	Some	A review with Mindy needed	Probably as good a program as with the lamps—but need to catch up with Mindy.
Surplus Property	Yes. Mostly donation or back through MA surplus property system.	None	They have been feeding local donation outlets for quite some time.
Construction/Demolition	Yes for in house projects. They separate materials into pure streams and use WMX for dumpster and transportation services.	Need to assist them to develop contractor policies and RFP language.	They have worked out a good deal with WMX to handle source separated materials.

**Westfield State College**  
**Cost of Recommended Recycling Program Enhancements**

**Fibers**

**Recommendation:** Mixed Paper plus Cardboard to breakaway compactor, marketed to North Star.

<b>Estimated Cost of Fiber Recycling Program, Westfield SC</b>		
<b>Item</b>	<b>Units</b>	<b>Value</b>
Estimated Fiber Generation (MP + OCC)	Tons/Yr	300
Current Fiber Recovery	Tons/Yr	79
Additional Fiber Available for Recovery	Tons/Yr	221
Capture of MP + OCC with 80% Recycling Rate	Tons/Yr	240
Cost of Current Fiber Recycling Program	\$\$/Yr	\$9,750
Breakaway Compactor		
Purchase	\$\$	\$13,845
4-Year Lease-to-Own	\$\$/Yr	\$4,217
Rental, Breakaway Compactor Box	\$\$/Yr	\$1,440
Haul to North Star	\$\$/Haul	\$140
Tons Per Haul to North Star	Tons/Haul	5.0
Total Hauls Per Year	Hauls/Yr	48.0
Total Annual Cost of Hauls to North Star	\$\$/Yr	\$6,720
Revenue, Mixed Paper + OCC	\$\$/Ton	\$25
Total Annual Revenues, Mixed Paper + OCC	\$\$/Yr	\$6,000
<b>Avoided Disposal Cost (Haul + Tip)</b>	<b>\$\$/Ton</b>	<b>\$125</b>
<b>Avoided Disposal Cost, Current Recycling Tonnage</b>	<b>\$\$/Yr</b>	<b>\$9,875</b>
<b>Avoided Disposal Cost, Total with Aggressive Recycling Program</b>	<b>\$\$/Yr</b>	<b>\$30,000</b>
<b>Annual Recycling Cost(Revenue) with Compactor Purchase</b>	<b>\$\$/Year</b>	<b>\$2,160</b>
<b>Annual Recycling Cost(Revenue) with 4-Year Lease-to-Own</b>	<b>\$\$/Year</b>	<b>\$6,377</b>
<b>Net Annual Cost(Savings) after Avoided Disposal Cost, Purchase</b>	<b>\$\$/Year</b>	<b>(\$27,840)</b>
<b>Net Annual Cost(Savings) after Avoided Disposal Cost, 4-Yr LTO</b>	<b>\$\$/Year</b>	<b>(\$23,623)</b>
<b>Net Annual Cost(Savings) after Avoided Cost, Accounting for Current Program, Purchase</b>	<b>\$\$/Yr</b>	<b>(\$27,715)</b>
<b>Net Annual Cost(Savings) after Avoided Cost, Accounting for Current Program, 4-Yr LTO</b>	<b>\$\$/Yr</b>	<b>(\$23,498)</b>

**Recommendation:** Purchase additional recycling containers

Cost of Recommended Recycling Supplies, Westfield State College			
Item	Number	Unit Cost	Total Cost
Deskside recycling bins	35	\$4.50	\$158
95-gallon wheeled recycling containers with slot tops (Schaefer or equivalent)	15	\$100	\$1,500
18-bushel hampers	6	\$185	\$1,110
<b>Total</b>			<b>\$2,768</b>